

## Refine Search

### Search Results -

Terms	Documents
L21 and amazon\$	1

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L22

Refine Search

Recall Text

Clear

Interrupt

### Search History

DATE: Friday, April 22, 2005   [Printable Copy](#)   [Create Case](#)

<u>Set</u> <u>Name</u> side by side	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
	<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>		
<u>L22</u>	L21 and amazon\$	1	<u>L22</u>
<u>L21</u>	L16 and 705/26-28.ccls.	20	<u>L21</u>
<u>L20</u>	L18 and ((ship\$ or deliver\$ or distribut\$) with address with customer)	0	<u>L20</u>
<u>L19</u>	L18 and (ship\$ with address with customer)	0	<u>L19</u>
<u>L18</u>	L17 and 705/?ccls.	0	<u>L18</u>
<u>L17</u>	L16 and 17	0	<u>L17</u>
<u>L16</u>	((manufactur\$ with (number or id\$)) with search\$) and @ad<=19991230	158	<u>L16</u>
<u>L15</u>	L14 and 17	1	<u>L15</u>
<u>L14</u>	L13 and 705/?ccls.	287	<u>L14</u>
<u>L13</u>	((manufactur\$ with number or id\$) with search\$) and @ad<=19991230	18429	<u>L13</u>
<u>L12</u>	L11 and 705/?ccls.	6	<u>L12</u>
<u>L11</u>	L7 and (updat\$ and (realtime or "real-time" or (real adj time)))	44	<u>L11</u>
<u>L10</u>	l8 not L9	5	<u>L10</u>

<u>L9</u>	L8 and updat\$ and real\$	8	<u>L9</u>
<u>L8</u>	L7 and 705/26-27.ccls.	13	<u>L8</u>
<u>L7</u>	((bonus\$ or discount\$ or award\$) same ( chart\$ or graph\$ or curv\$ or bar\$) same (sum\$ or total\$)) and @ad<=19991230	210	<u>L7</u>
<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
<u>L6</u>	L1 and (target\$ or total\$ or bonus\$ or coupon\$ or discount\$) and (graph\$ or curve or bar\$ or chart\$)	2	<u>L6</u>
<u>L5</u>	L1 and (target\$ or total\$ or bonus\$ or coupon\$ or discount\$)	3	<u>L5</u>
<u>L4</u>	L1 and (bonus\$ or coupon\$ or discount\$)	2	<u>L4</u>
<u>L3</u>	L2 and real\$	3	<u>L3</u>
<u>L2</u>	L1 and updat\$	4	<u>L2</u>
<u>L1</u>	5960411.pn. or 6516302.pn. or 5937391.pn. or 6249771.pn.	4	<u>L1</u>

END OF SEARCH HISTORY

## Hit List

Clear	Generate Collection	Print	Fwd Refs	Backwd Refs
Generate OACS				

**Search Results** - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6327570 B1

**Using default format because multiple data bases are involved.**

L12: Entry 1 of 6

File: USPT

Dec 4, 2001

US-PAT-NO: 6327570

DOCUMENT-IDENTIFIER: US 6327570 B1

TITLE: Personal business service system and method

DATE-ISSUED: December 4, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stevens; Dian	Hillsborough	NJ	08876	

US-CL-CURRENT: 705/7; 705/10, 705/21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGS	Draw. De
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☐ 2. Document ID: US 6061691 A

L12: Entry 2 of 6

File: USPT

May 9, 2000

US-PAT-NO: 6061691

DOCUMENT-IDENTIFIER: US 6061691 A

TITLE: Method and system for inventory management

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGS	Draw. De
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☐ 3. Document ID: US 6035280 A

L12: Entry 3 of 6

File: USPT

Mar 7, 2000

US-PAT-NO: 6035280

DOCUMENT-IDENTIFIER: US 6035280 A

TITLE: Electronic discount couponing method and apparatus for generating an electronic list of coupons

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	IMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	-----	----------

☐ 4. Document ID: US 5991735 A

L12: Entry 4 of 6

File: USPT

Nov 23, 1999

US-PAT-NO: 5991735

DOCUMENT-IDENTIFIER: US 5991735 A

TITLE: Computer program apparatus for determining behavioral profile of a computer user

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	IMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	-----	----------

☐ 5. Document ID: US 5948040 A

L12: Entry 5 of 6

File: USPT

Sep 7, 1999

US-PAT-NO: 5948040

DOCUMENT-IDENTIFIER: US 5948040 A

TITLE: Travel reservation information and planning system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	IMC	Draw. De
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☐ 6. Document ID: US 5424524 A

L12: Entry 6 of 6

File: USPT

Jun 13, 1995

US-PAT-NO: 5424524

DOCUMENT-IDENTIFIER: US 5424524 A

TITLE: Personal scanner/computer for displaying shopping lists and scanning barcodes to aid shoppers

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	IMC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--------	-----	----------

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L11 and 705/?ccls.	6

Display Format:  [Previous Page](#)[Next Page](#)[Go to Doc#](#)

## Hit List

[Clear](#) [Generate Collection](#) [Print](#) [Fwd Refs](#) [Bkwd Refs](#)  
[Generate OACS](#)

**Search Results** - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 20010051894 A1

**Using default format because multiple data bases are involved.**

L10: Entry 1 of 5

File: PGPB

Dec 13, 2001

PGPUB-DOCUMENT-NUMBER: 20010051894

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010051894 A1

TITLE: INTERNET COUPON SELECTION SYSTEM

PUBLICATION-DATE: December 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
DELAPA, JAMES P.	GRAND RAPIDS	MI	US	

US-CL-CURRENT: [705/14](#); [705/26](#), [709/203](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Draw. De
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☐ 2. Document ID: US 6697785 B2

L10: Entry 2 of 5

File: USPT

Feb 24, 2004

US-PAT-NO: 6697785

DOCUMENT-IDENTIFIER: US 6697785 B2

TITLE: System, method and apparatus for coupon processing and booklet

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Draw. De
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☐ 3. Document ID: US 6564189 B1

L10: Entry 3 of 5

File: USPT

May 13, 2003

US-PAT-NO: 6564189

DOCUMENT-IDENTIFIER: US 6564189 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Universal methods and apparatus for determining prices and rewards within retail transactions

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
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☐ 4. Document ID: US 6330543 B1

L10: Entry 4 of 5

File: USPT

Dec 11, 2001

US-PAT-NO: 6330543

DOCUMENT-IDENTIFIER: US 6330543 B1

TITLE: Method and system for distributing and reconciling electronic promotions

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
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☐ 5. Document ID: US 5231568 A

L10: Entry 5 of 5

File: USPT

Jul 27, 1993

US-PAT-NO: 5231568

DOCUMENT-IDENTIFIER: US 5231568 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Promotional game method and apparatus therefor

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	----------

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L8 not L9	5

Display Format:  [Previous Page](#)[Next Page](#)[Go to Doc#](#)

43-44

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)**End of Result Set**

Generate Collection

Print

L22: Entry 1 of 1

File: USPT

Sep 23, 2003

DOCUMENT-IDENTIFIER: US 6625581 B1

TITLE: METHOD OF AND SYSTEM FOR ENABLING THE ACCESS OF CONSUMER PRODUCT RELATED INFORMATION AND THE PURCHASE OF CONSUMER PRODUCTS AT POINTS OF CONSUMER PRESENCE ON THE WORLD WIDE WEB (WWW) AT WHICH CONSUMER PRODUCT INFORMATION REQUEST (CPIR) ENABLING SERVLET TAGS ARE EMBEDDED WITHIN HTML-ENCODED DOCUMENTS

Application Filing Date (1):

19991122

Brief Summary Text (33):

Another object of the present invention is to provide such a system with a number of different modes of operation, namely: a Manufacturer/Product Registration Mode, wherein manufacturers can register their companies and consumer products (e.g. UPC numbers and URLs) with the system; an UPN-Directed Information Access Mode, wherein consumers can access and display information menus containing UPC numbers linked to URLs pointing Web pages containing consumer product related information by scanning the UPC label on the consumer product or by entering the UPC number thereof into a data-entry screen displayed by the system in this mode; a Manufacturer Website Search Mode, wherein the home page of a manufacturer's Web-site can be automatically accessed and displayed by scanning the UPC label on any consumer product of the manufacturer or by entering the UPC number thereof into a data-entry screen displayed by the system in this mode; a Trademark-Directed Search Mode enabling consumers to use trademarks and/or tradenames associated with consumer products to search for consumer-product related information registered within the system; and a Product-Description Directed Search Mode enabling consumers to use product descriptors associated with particular consumer products to search for consumer-product related information registered within the system.

Detailed Description Text (84):

Having constructed the "seeded" Database, it can then be used to connect the client subsystem of users to the home page of Web-sites of manufacturers of particular products. Initially, when an Internet user provides the UPC number of a particular product as input to the Input Box of the HTML form displayed in the information display frame of the client subsystem (e.g. when operated in its Manufacturer Website Search Mode), then the IPD Server need only compare the first six digits of the entered UPC number against the first six-digits of the Manufacturer Reference UPC Numbers (i.e. Manufacture Identification Numbers) listed in the "seeded" Database. The corresponding (home-page) URL of the matching manufacturer is returned to the client subsystem Ca for display. In instances of an initially seeded Database, in which only the "Manufacturer Reference UPC Numbers" are listed therein, the requesting client subsystems are provided with the URLs of the home pages of the symbolically linked manufacturers. Then as manufacturers begin to register their consumer products with the system (e.g. in response to mass e-mailings, advertisements and/or marketing and promotional efforts, etc.), the IPD Database will return a menu of "hot-linked" URLs, for each registered product, pointing to various types of product-related information resources on the Internet (described above) that can be easily accessed by simply clicking thereon in a conventional manner. Over time, Manufacturer Reference UPC Numbers and the URLs of

the "home pages" of such manufacturers will become replaced by the UPC numbers of registered products and the menu of URLs on the WWW symbolically linked thereto by the manufacturers, thereby allowing consumers and users of the system to precisely pinpoint consumer product-related information on the WWW which has been specified by the manufacturer, its marketing department and/or advertising agency. With manufacturer's and advertiser's participation and feedback, the initially seeded RDBMS described hereinabove will quickly grow into a robust RDBMS richly filled with the various information items described in FIGS. 4A1 and 4A2, including the symbolically linked UPCs and URLs that point to very specific consumer product related information resources (i.e. files) stored within IPI Servers of the system located across the global expanse of the Internet.

Detailed Description Text (222):

As shown in FIG. 4S3, the consumer having accessed the product-specific search results of FIG. 4S2, may then select, from the displayed URL Menu, a URL displayed in the "Buy On The Web" URL category thereof, thereby automatically linking to the EC-enabled store or product catalogue specified by the selected URL, as shown in FIG. 4S2, and thus enabling the purchase of the advertised product or service thereat. Preferably, the EC-enabled store or product catalog employs the "one-click purchase order" placement system and method taught in U.S. Pat. No. 5,960,411 to Hartman, et al., and assigned to Amazon.com, Inc., which is incorporated herein by reference in its entirety. This would simplify ordering the product by the retailer having the consumer's credit card and shipping address information on file.

Detailed Description Text (242):

In the illustrative embodiment of the present invention, the homepage of each registered manufacturer's Website will display a visually conspicuous radio button labeled "UPC Request.TM. Product Finder" or the like. Moreover, whenever a consumer attempts to search the manufacturer's limited-version UPN/URL database for products not registerable to the manufacturer (i.e. using UPC numbers not containing the manufacturer's 6-digit UCC Manufacturer Identification Number), the limited-version of the UPN/URL database will automatically display an HTML-encoded message from the manufacturer's Website, urging the consumer to surf to the IPI Registrant Database of the system (maintained on the network of IPD servers 11). Preferably, such HTML-encoded messages will have a hot-linked URL (i.e. anchor) to Website(s) providing consumer access to the "master" UPN/URL database.

Detailed Description Text (274):

As indicated at Block E, the translated query is used to search the RDBMS IIA and find the set of URLs (i) linked to the registered consumer product (by the manufacturer or agent thereof) assigned the UPC or EAN number entered into the Input Box of the HTML form, and (ii) pointing to HTML documents on the WWW containing particular types of consumer product related information. The result returned from the RDBMS 9 is an ASCII record specifying the set of URLs satisfying the above criteria. In order for the Web browser of the requesting client subsystem to display the results of the database search during this mode, the ASCII record must be converted into a HTML document (i.e. Web output form).

Detailed Description Text (284):

At Block F in FIG. 6D2, a CGI script within IPD server 11" creates the elements of another HTML document (Web auxiliary input form), inserts the preliminary search result from the RDBMS 9 into the Web auxiliary input form, and sets the Content-type of this HTML document to text/html. In the illustrative embodiment, the Web auxiliary-input form has an ACTION which specifies the URL of a CGI script within the IPD server 11" that will act upon the request appropriately as if the system were in the UPN-Directed Information Access Mode. The Web auxiliary input form includes an Input Box listing all triplet data sets (i.e. Product Description, Manufacturers and UPN number) satisfying the input trademark search criteria entered in the primary Web input document, described hereinabove. The qualifying triplets listed in the Input Box are provided with a Radio-Button to allow the



consumer or retail sales clerk to select one of the triplets from the list thereof for use in a subsequent refined search of the RDBMS 9. The Web auxiliary-input form also has a SUBMIT button for sending the HTML form back to the IPD server 11" for processing.

Detailed Description Text (298):

At Block F in FIG. 6E2, the IPD server 11" creates the elements of another HTML document (Web auxiliary input form), inserts the preliminary search result from the RDBMS 9 into the Web auxiliary input form, and sets the Content-type of this HTML document to text/html. In the illustrative embodiment, the Web auxiliary-input form has an ACTION which specifies the URL of a CGI script within IPD server 11" that will act upon the request appropriately as if the system were in the UPN-Directed Information Access Mode. The Web auxiliary input form includes an Input Box listing all triplet data sets (i.e. Trademark, Manufacturer, and UPN number) satisfying the input product-description search criteria entered in the primary Web input document, described hereinabove. The qualifying triplets listed in the Input Box are provided with a Radio-Button to allow the consumer or retail sales clerk to select one of the triplets from the list thereof for use in a subsequent refined search of the RDBMS 9. The Web auxiliary-input form also has a SUBMIT button for sending the HTML form back to the IPD server 11" for processing.

Detailed Description Text (344):

At home, in the office, or on the road, HOME-PAGE.TM. enables consumers to automatically access the WWW Home Page of any registered manufacturer by entering the UPN (or UPC/EAN number) on any product into the search screen served up by a particular UPC REQUEST.TM. Retailer Website, or by the UPC REQUEST.TM. Central Website.

Current US Original Classification (1):

705/27

Current US Cross Reference Classification (2):

705/26

CLAIMS:

26. The Internet-based consumer product information search and delivery method of claim 25, wherein said one or more URLs have been specified by the manufacturer of the consumer product identified by said UPN and/or an agent thereof.

28. The Internet-based consumer product information search and delivery system of claim 27, wherein said one or more URLs have been specified by the manufacturer of the consumer product identified by said UPN and/or an agent thereof.

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End of Result Set



Generate Collection

Print

L12: Entry 6 of 6

File: USPT

Jun 13, 1995

US-PAT-NO: 5424524

DOCUMENT-IDENTIFIER: US 5424524 A

TITLE: Personal scanner/computer for displaying shopping lists and scanning barcodes to aid shoppers

DATE-ISSUED: June 13, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ruppert; Jonathan P.	Morgan Hill	CA	95037	
Fish; Ronald C.	Morgan Hill	CA	95037	

APPL-NO: 08/ 082257 [PALM]

DATE FILED: June 24, 1993

INT-CL: [06] G06 K 7/10, G06 K 15/00

US-CL-ISSUED: 235/462; 235/383, 364/402, 364/709.02

US-CL-CURRENT: 705/8; 235/383, 235/462.13, 235/462.46, 705/17, 705/23, 705/28, 708/132

FIELD-OF-SEARCH: 235/383, 235/462, 364/401, 364/402, 364/403, 364/709.02, 364/710.02

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3983573</u>	September 1976	Ishihara	357/24
<input type="checkbox"/>	<u>4071740</u>	January 1978	Gogulski	235/431
<input type="checkbox"/>	<u>4973952</u>	November 1990	Malec et al.	34/825
<input type="checkbox"/>	<u>5187354</u>	February 1993	Bengtsson	235/472
<input type="checkbox"/>	<u>5221838</u>	January 1993	Gutman	235/379
<input type="checkbox"/>	<u>5250789</u>	October 1993	Johnsen	235/383

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO  
9002296

PUBN-DATE  
May 1992

COUNTRY  
NL

US-CL

#### OTHER PUBLICATIONS

"Model BHC5532 Bar Code Reader", Densei, Nippon Electric Industry Co., Ltd.  
"NPD Neilsen Reshapes The Future of Home-Based Market Research ", Real-Times, vol. 3, Nov. 2, 1991 p. 1.  
"PTCs Speed POS Conversions At Woolworth Corporation", Real-Times, vol. 3, No. 2, 1991 p. 6.  
"Telxon Touch-Screen Technology Captures Customers' Approval", Real-Times, vol. 3, No. 2, 1991 p. 6.  
"Device may let supermarkets bag checkout lines", San Jose Mercury News, Business, Oct. 12, 1993 p. 1.  
"Check it our-yourself", San Francisco Examiner, Sunday Jan. 10, 1993, p. E-16.  
"Point of Sale; POS hardware wizardry comes to market", Automatic I.D. News, Jan. 1994, p. 50.

ART-UNIT: 254

PRIMARY-EXAMINER: Hajec; Donald

ASSISTANT-EXAMINER: Frech; Karl D.

ATTY-AGENT-FIRM: Fish; Ronald Craig Falk, Vestal & Fish

#### ABSTRACT:

A personal bar code scanning device for aiding shoppers in keeping track of their expenditures and speeding the process of check-out and taking advantage of coupons. A microprocessor coupled to a bar code reader, a communication port, an audible feedback device and a touchscreen or light pen and display combination carries out bar code scanning in a store as a shopper shops. The user selects a shopping list from a collection of one or more shopping lists or creates a new list from a database or by spelling out the items to purchase on a keyboard. The user then downloads the store's current price list by modem or by connecting to the store computer when the store is entered. When the shopper wishes to purchase an item, the personal bar code scanning device is placed adjacent to the bar code on the package of the item and the user presses a button to scan the bar code. The bar code is then imaged by a CCD device, and the pattern of light and dark bars is decoded into an ASCII string which is stored in memory and compared to the current shopping list and the current price list. When a match is found, the display is changed to indicate the item scanned has been put in the basket. The price of the item is then added to the running total. In some embodiments, when the price list is downloaded, there is automatically downloaded a coupon list of items currently on sale. When an item is scanned, the ASCII identification string is compared to the coupon list, and, if a match is found, the discount from the coupon is automatically applied before updating the running total. In some embodiments, a magnetic security strip is used next to the bar code. The personal bar code scanner includes a pair of permanent magnets or electromagnets to generate a D.C. or nonvarying magnetic field which can envelope the magnetic security strip to deactivate it when an item has been scanned. This prevents the item from setting off security alarms when passing a security device at a store exit. In some embodiments, the Personal Scanner.TM. device is mounted on a shopping cart for use by user's who do not own their own devices.

22 Claims, 15 Drawing figures

[First Hit](#)[Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)**End of Result Set**

Generate Collection

Print

L12: Entry 6 of 6

File: USPT

Jun 13, 1995

DOCUMENT-IDENTIFIER: US 5424524 A

TITLE: Personal scanner/computer for displaying shopping lists and scanning barcodes to aid shoppers

Abstract Text (1):

A personal bar code scanning device for aiding shoppers in keeping track of their expenditures and speeding the process of check-out and taking advantage of coupons. A microprocessor coupled to a bar code reader, a communication port, an audible feedback device and a touchscreen or light pen and display combination carries out bar code scanning in a store as a shopper shops. The user selects a shopping list from a collection of one or more shopping lists or creates a new list from a database or by spelling out the items to purchase on a keyboard. The user then downloads the store's current price list by modem or by connecting to the store computer when the store is entered. When the shopper wishes to purchase an item, the personal bar code scanning device is placed adjacent to the bar code on the package of the item and the user presses a button to scan the bar code. The bar code is then imaged by a CCD device, and the pattern of light and dark bars is decoded into an ASCII string which is stored in memory and compared to the current shopping list and the current price list. When a match is found, the display is changed to indicate the item scanned has been put in the basket. The price of the item is then added to the running total. In some embodiments, when the price list is downloaded, there is automatically downloaded a coupon list of items currently on sale. When an item is scanned, the ASCII identification string is compared to the coupon list, and, if a match is found, the discount from the coupon is automatically applied before updating the running total. In some embodiments, a magnetic security strip is used next to the bar code. The personal bar code scanner includes a pair of permanent magnets or electromagnets to generate a D.C. or nonvarying magnetic field which can envelope the magnetic security strip to deactivate it when an item has been scanned. This prevents the item from setting off security alarms when passing a security device at a store exit. In some embodiments, the Personal Scanner.TM. device is mounted on a shopping cart for use by user's who do not own their own devices.

Application Filing Date (1):

19930624

Brief Summary Text (12):

In alternative embodiments, when the user downloads a price list, a list of current discount coupons is also downloaded with the price list. This saves the cost to the stores of publishing the coupons and simplifies the life of the user. When the user enters the store and scans an item, the description of the item is used to automatically scan not only the shopping list and price list but also the current coupon list to determine if any discounts apply. If a discount coupon matching the scanned item is found, the discount is automatically applied to the price of the item before the running total is updated.

Brief Summary Text (13):

In the preferred embodiment, the price list is data compressed using known

compression algorithms used in FAX machines prior to transmission to the Personal Scanner.TM. device and is stored in compressed form. The list can be decompressed in the Personal Scanner.TM. device prior to use in updating the running total as each item is scanned or during the processing to match a scanned item to items on the shopping list.

Detailed Description Text (8):

In the preferred embodiment, the price list is data compressed using known compression algorithms used in FAX machines prior to transmission to the Personal Scanner.TM. device and is stored in compressed form. The list can be decompressed in the Personal Scanner.TM. device prior to use in updating the running total as each item is scanned or during the processing of FIG. 12.

Current US Original Classification (1):

705/8

Other Reference Publication (2):

"NPD Neilsen Reshapes The Future of Home-Based Market Research ", Real-Times, vol. 3, Nov. 2, 1991 p. 1.

Other Reference Publication (3):

"PTCs Speed POS Conversions At Woolworth Corporation", Real-Times, vol. 3, No. 2, 1991 p. 6.

Other Reference Publication (4):

"Telxon Touch-Screen Technology Captures Customers' Approval", Real-Times, vol. 3, No. 2, 1991 p. 6.

CLAIMS:

8. The apparatus of claim 6 wherein said means for downloading a shopping list further comprises means for downloading a current coupon savings or discount list from another computer coupled to said processing means via said communication means and for storing said coupon list in said memory, said means for downloading a current coupon savings or discount list also coupled to said barcode reading means such that whenever an item is scanned, a product identification encoded in said string of characters decoded by said barcode reading means is compared to said coupon list, and if a match is found, for extracting the coupon savings or discount of the matching coupon and automatically deducting the coupon savings or discount from the coupon matching the item scanned from the current price of the item extracted from said price list and adding the result to said running total of the cost of all items scanned.

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Generate Collection

Print

L12: Entry 2 of 6

File: USPT

May 9, 2000

US-PAT-NO: 6061691

DOCUMENT-IDENTIFIER: US 6061691 A

TITLE: Method and system for inventory management

DATE-ISSUED: May 9, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fox; Billy Shane	Dallas	TX		

US-CL-CURRENT: 707/104.1; 705/10, 705/28, 705/8

ABSTRACT:

A method is provided for inventory management which includes an initial step of receiving a customer request for an inventory item and then generating a table or menu of one or more inventory items that most closely correspond to the customer request using a price forecasting system. Based on negotiations concerning price, timing and other typical concerns, an item is selected from the table and a price quotation associated with the selected inventory item is generated using the price forecasting system, which price quotation has been predetermined by a

yield management system using a pricing strategy. The customer information associated with the customer request is input into a traffic billing system. Information needed for price recalculation associated with the customer request is input into the yield management system. The yield management system recalculates pricing data with in a manner consistent with a pricing strategy implemented by the yield management system, so that price changes caused by a reduction in available inventory due to the customer request are taken into account, and the pricing data accessed by the price forecasting system when a price quotation is generated is updated prior to repeating the process for a subsequent customer request. This method provides more accurate pricing than known systems where order information must be entered manually before a price recalculation can take place, and the yield management system overestimates the amount of available inventory. If the customer request comprises a reservation having an associated probability of later becoming an order, the reservation is taken into account when recalculating prices based on available inventory. Such a process may be integrated for an enterprise made up of a number of member stations each having associated inventory for sale.

15 Claims, 10 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

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L10: Entry 3 of 5

File: USPT

May 13, 2003

DOCUMENT-IDENTIFIER: US 6564189 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Universal methods and apparatus for determining prices and rewards within retail transactions

Application Filing Date (1):

19981222

Detailed Description Text (6):

FIG. 3 illustrates a procedure 300 for determining the item price or reward value in accordance with one aspect of the present invention. The process begins at process step 302, when the barcode of an item is scanned by a scanner such as the barcode scanner 130 of FIG. 1. At step 304, the barcode scanner provides the Universal Product Code (UPC) to the POS application program, which in turn sends a query to a file server such as the POS server 220 in FIG. 2. While the present invention makes reference to UPC codes, it will be recognized that other codes may also be suitably employed. At process step 306, the POS server returns the PLU record to the POS terminal. The PLU record is read at step 308 to determine the item price and to determine if there is a universal price/reward record available for the item. If there is no universal price or reward record for the scanned item, the process proceeds to step 312. At this step, the item price is read from the PLU record and the transaction total is incremented. At process step 314, the POS application program waits for the next item to be scanned, or for the POS terminal operator to indicate that there are no more items to be scanned. If another item is scanned, the process returns to step 302, wherein steps 304 through 314 are repeated. The POS operator would indicate that there are no more items to be scanned by pressing a total key on the operator keyboard such as the operator keyboard 121 in FIG. 1. If step 308 determined that there was a universal price/reward record for the scanned item, the process would proceed to step 310 and the POS application program would send a query for the universal price/reward record to the POS server. Alternately, the PLU record may contain the universal price/reward record within the PLU file, obviating the need for a separate query in step 310. As a further alternative, the PLU query of step 304 may execute a simultaneous query of the universal price/reward file, if such file exists separately from the PLU file. When the operator indicates that there are no more items to be scanned, the process proceeds to step 316, wherein the collected universal price/reward records are processed. It will be recognized that the processing of said universal pricing records in step 318 may vary based upon the particular implementation of the universal price/reward system. For example, in one implementation, each scanned quantity of a given item may be priced at the normal regular price. Then, when the universal price record is processed, the POS application program may credit the total discount allowed on the sum of the quantity purchased, and indicate as such in a single line item on the customer's printed receipt. In another implementation, the universal price record is processed as each item is scanned and the discount is displayed and printed immediately. Another implementation may sort the purchased items before applying the discount or reward. This is useful in properly applying per dollar or per pound types of rewards. The process ends at step 318 when the POS operator indicates that the transaction is completed by pressing a tender type key on the POS terminal operator keyboard.

Current US Cross Reference Classification (2):  
705/26

Current US Cross Reference Classification (3):  
705/27

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L10: Entry 3 of 5

File: USPT

May 13, 2003

US-PAT-NO: 6564189

DOCUMENT-IDENTIFIER: US 6564189 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Universal methods and apparatus for determining prices and rewards within retail transactions

DATE-ISSUED: May 13, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 09/ 219136 [PALM]

DATE FILED: December 22, 1998

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/20; 705/26, 705/27, 705/14

US-CL-CURRENT: 705/20; 705/14, 705/26, 705/27

FIELD-OF-SEARCH: 705/15-17, 705/20, 705/14, 705/22-23, 705/26-27, 705/33

PRIOR-ART-DISCLOSED:

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Search ALL

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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ART-UNIT: 2165

PRIMARY-EXAMINER: Nguyen; Cuong

ATTY-AGENT-FIRM: Priest & Goldstein, PLLC

## ABSTRACT:

A universal price/reward system for determining product prices or reward values. The system disclosed is implemented by utilizing a table of prices, reward information, or the like distinct from a POS system's existing Price Look-Up (PLU) file format. The table data utilized may be appended to an existing PLU file, or it may exist in a separate file located on the same file server, or on a separate file server. This approach allows a retail merchant to easily create and modify incentive pricing programs and promotional reward programs without having to modify the basic structure of the PLU file or the POS application program. The universal price/reward system can be implemented as part of the PLU file, or through a separate companion file on a POS store controller or file server.

15 Claims, 7 Drawing figures

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L12: Entry 2 of 6

File: USPT

May 9, 2000

DOCUMENT-IDENTIFIER: US 6061691 A

TITLE: Method and system for inventory management

Abstract Text (2):

yield management system using a pricing strategy. The customer information associated with the customer request is input into a traffic billing system. Information needed for price recalculation associated with the customer request is input into the yield management system. The yield management system recalculates pricing data with in a manner consistent with a pricing strategy implemented by the yield management system, so that price changes caused by a reduction in available inventory due to the customer request are taken into account, and the pricing data accessed by the price forecasting system when a price quotation is generated is updated prior to repeating the process for a subsequent customer request. This method provides more accurate pricing than known systems where order information must be entered manually before a price recalculation can take place, and the yield management system overestimates the amount of available inventory. If the customer request comprises a reservation having an associated probability of later becoming an order, the reservation is taken into account when recalculating prices based on available inventory. Such a process may be integrated for an enterprise made up of a number of member stations each having associated inventory for sale.

Application Filing Date (1):19981218Brief Summary Text (7):

These functions depend in large part on the manner in which the inventory management system calculates the value of a future program (TV) or time segment (radio). Commercially available inventory management systems such as the Maxagrid system include a yield management system which produces a pricing forecast used to determine prices for sales of commercial time based on factors such as past trends and performance data which are updated periodically in order to maintain an accurate pricing model. See generally Pricing & Rate Forecasting Using Broadcast Yield Management, B. Shane Fox, published by the National Association of Broadcasters, 1992, and Broadcast Revenue Management: Pricing Inventory Management in Today's Broadcast Environment, B. Shane Fox, published by the National Association of Broadcasters, 1997. These results can be further improved by employing an inventory utilization index ("IUI") when ranking time for sale as described in applicant's co-pending U.S. Serial No. U.S. Ser. No. 09/143,586, filed Aug. 31, 1998, the contents of which are incorporated by reference herein for all purposes. The valuations generated by the yield management system are then input to a price forecasting system which is the part of the Maxagrid software which provides a user interface for a salesperson generating rate quotations for a customer. However, even with a sophisticated approach to valuation of inventory and price forecasting, the results are limited by the accuracy of available data concerning time already sold or likely to be sold.

Brief Summary Text (8):

Media property traffic billing systems commercially available from sources such as Marketron, Columbine/JDS, CBSI, Datacount, and Computer Concepts book orders for commercial time, maintain advertising schedules, and perform related accounting

functions. According to present practice, a media property using a yield management system such as the Maxagrid system generates an order which results in a confirmation, generally in printed form, that is printed out for the stations records and a copy mailed to the customer. Eventually, the order is manually entered into the traffic billing system, generally in a batchwise fashion, and subsequently the traffic billing system generates a file of order data which is imported into the yield management system. The yield management system, receiving an update from the traffic billing system, then recalculates the number of commercial units or minutes available for sale by program or time period and the resulting change in the pricing forecast, which is then input to the price forecasting system.

Brief Summary Text (9):

Due to the need to enter order data manually into the traffic billing system and the subsequent delay in updating the pricing forecast several steps later, or a delay in receiving information from the traffic billing system, there is a serious risk that an order will be placed using inaccurate availability and pricing forecast data. This may be simply a conflict over available time, i.e., selling the same time twice or overbooking for a particular program, or a more subtle problem in charging too little for a program which has in fact moved to a higher price point along a demand curve generated by the inventory management system because of orders that have already been placed but have not yet been taken into account in the pricing forecast. There is, therefore, a need for a system that can improve pricing accuracy by providing automatic updating of the pricing forecast, so that in an optimum state the effect of each order on the pricing forecast is taken into account before the next order is placed. The present invention addresses this need.

Brief Summary Text (13):

In accordance with a first aspect of the present invention, a method is provided for inventory management which includes an initial step of receiving a customer request for an inventory item and then generating a table or menu of one or more inventory items that most closely correspond to the customer request using a price forecasting system. Most typically the inventory item is associated with a future event, such as an available advertising time associated with a specific time period or program. Based on negotiations concerning price, timing, programming mix and other typical concerns, an item (or items) is/are selected from the table and a price quotation associated with the selected inventory item(s) is generated using the price forecasting system; the price quotation has been predetermined by a yield management system using a pricing strategy. The customer information associated with the customer request is input into a traffic billing system. Information needed for price recalculation associated with the customer request is input into the yield management system. The yield management system recalculates pricing data within a manner consistent with a pricing strategy implemented by the yield management system, so that price changes caused by a reduction in available inventory due to the customer request are taken into account, and the pricing data accessed by the price forecasting system when a price quotation is generated is updated prior to repeating the process for a subsequent customer request. This method provides more accurate pricing than known systems where order information must be entered manually before a price recalculation can take place, and the yield management system consistently overestimates the amount of available inventory. According to a preferred aspect of this method, in the event changes are later made to the customer's order information stored in the traffic billing system, data reflecting the changes is forwarded from the traffic billing system to the yield management system, and the pricing data is recalculated by the yield management system in a manner consistent with a pricing strategy implemented by the yield management system so that price changes caused by the change in available inventory due to the change to the customer's order are taken into account.

Brief Summary Text (14):

An inventory management system for carrying out this process includes a price forecasting system for generating a table of inventory items that meet specified customer request criteria, a yield management system for generating and maintaining true availability and inventory pricing information for use by the price forecasting system in accordance with a pricing strategy, a traffic billing system for generating confirmations of orders for inventory and for maintaining scheduling, processing and accounting information in data files relating to such orders, and a process for recalculating pricing data with the yield management system in a manner consistent with the pricing strategy implemented by the yield management system so that price changes caused by a change in available inventory can be taken into account, wherein the recalculating system is configured to operate with sufficient frequency such that the effect of each customer order on pricing is taken into account before a price quote for a subsequent customer order is generated. Where each of the price forecasting system, yield management system and traffic billing system are separate software modules, data passes automatically between these systems so that updating of the related data files containing inventory and order information is completed prior to the next use of the system in response to the next customer request. However, a slight delay in updating may also be acceptable because the impact of any one transaction on the overall pricing strategy is not usually great.

Drawing Description Text (6):

FIG. 6 is a schematic diagram of a price forecast update process according to the invention;

Detailed Description Text (2):

FIG. 1 illustrates a system diagram of an integrated inventory management (IMS) system 10 according to the invention. When a customer 12 requests a quotation for media advertising time, the sales person uses a price forecasting software system 14 to calculate the prices to be quoted to customer 12. Price forecasting system 14 ideally should have the most current prices for each time block or slot available at the time of purchase for quotation to that new potential customer 12. When customer 12 has made a purchasing decision, that decision will result in either a firm order (confirmation 18) or a reservation 16 (tentative order). In response to a firm order, a written confirmation 18 is generated by the yield management system (or traffic billing system) and mailed 8 to the customer, and the order information is electronically entered into a traffic billing system 20 and a yield management software system 22. Yield management system 22 immediately recalculates time slot prices, taking into account the most recent order, and sends updated values to the price forecasting system 14 used by the sales person.

Detailed Description Text (3):

There is normally no need for a direct download of information from traffic billing system 20 to yield management system 22. However, changes entered directly by a manager 24 may be directly input into traffic billing system 20 due to circumstances such as last minute cancellations, "make goods", preemptions, rebookings or accidents. Under these circumstances, traffic billing system 20 exports booked data (orders) back to the yield management system 22 for comparison with the information sent by the yield management system 22 to the price forecasting system 14. This update comparison may be done each time traffic billing system 20 changes booking information, or periodically, and yield management system 22 may intermittently query traffic billing system 20 for changes in data. In the event of a conflict between the information sent by the yield management system 22 to the price forecasting system 14 and traffic billing system 20, the information from traffic billing system 20 overrides any information previously provided by the yield management system 22 to the price forecasting system 14.

Detailed Description Text (7):

In the second approach, demand curves are developed and updated based on actual prior sales information and information about the market the media property

competes in. The Maxagrid.TM. software available from Maxagrid International, Inc. uses demand curves of this type based on historical station and market information and anticipated trends. Price forecasts extend as far as 52 weeks from current week, providing a pricing structure that guards against selling rates that are too low when large amounts of inventory are available. Starting rates too low can result in problems such as early sellout, preemptions, or being forced to price remaining inventory too high in a last-minute attempt to make budget goals, whereas improved forecasting of demand results in better inventory management and greater station revenues.

Detailed Description Text (12):

A skilled, experienced sales manager that is familiar with the economic principles underlying broadcast revenues can design demand curves based on business experience rather than an exhaustive analysis of economic factors, and such a curve may perform as well as one developed to take into account a multitude of specific economic factors. This can be accomplished by close adherence to sound economic principles and station management practices such as those set forth in Pricing & Rate Forecasting Using Broadcast Yield Management, B. Shane Fox, published by the National Association of Broadcasters, 1992, and Broadcast Revenue Management: Pricing Inventory Management in Today's Broadcast Environment, B. Shane Fox, published by the National Association of Broadcasters, 1997, the contents of which are incorporated by reference herein. For example, creating and updating meaningful demand curves requires keeping accurate records of each salesperson's claimed and actual performance on a sale-by-sale basis, rather than as a vague prediction that the salesperson will sell X\$ to his or her customers within the next two weeks. Meetings are held at regular intervals so that prices can be revised in response to changing conditions. Past selling patterns are evaluated and tracked in a manner that tends to raise prices and decrease demand for historically oversold time segments, and lower prices and thus increase demand for undersold time slots. Seasonal and day of the week variations are taken into account. The end result should be an effective demand curve given the circumstances of the individual business concern, which vary widely such that no one approach is optimum in all circumstances. Changes in the demand curves are reflected by corresponding changes to the data files accessed by yield management system 22.

Detailed Description Text (15):

Percent of advertising revenues by media category establishes the level and degree of media differentiation with a particular market. An example would be radio revenues as a percentage of total advertising revenues, typically anywhere from 8 to 20% depending upon the market. This demand factor assists in the quantification of the amount of inventory to be opened up for discount, as well as the initial rate of increases in the demand curve (slope function determination). If, for example, radio revenues are a large fraction of total advertising revenues, a smaller amount of inventory can be made available for sales to discount buyers, discussed further below. If radio revenues are a smaller fraction of total advertising revenues, the slope function of the demand curve would increase more slowly as inventory is depleted on the theory that a more rapid price increase is more likely to drive a potential buyer off to some other form of advertising.

Detailed Description Text (21):

Demand curves such as these are used by the yield management system and price forecasting system in order to determine an inventory utilization index (IUI) which selects and ranks programs for sale by the salesperson in response to the customer's inquiry as described in U.S. Patent Application Serial No. U.S. Ser. No. 091/143,586, filed Aug. 31, 1998, the contents of which are incorporated by reference herein. The customer usually selects program ad times according to the IUI list, and the resulting order or reservation causes an update to the yield management system data. The change in availability is noted so that the next sale for that program is made at the next higher increment of percent availability along the demand curve.

Detailed Description Text (26):

If the customer decides to buy time rather than merely reserve it at a decision 36, the system proceeds through decisions 36 and 37 to a step 38 wherein the date and time of the purchase, the time block or segment sold, the price, the sales information for the customer, and other customer sales information is entered into the price forecasting system 14 to be forwarded to the yield management system 22 and traffic billing system (TBS) 20 (see FIG. 1). Upon connecting to the yield management system at step 39 and imparting the relevant information, yield management system 22 recalculates A and F.sub.N based on the amount of time sold S at step 41. Demand curve statistics, namely the applicable percent availability, are then updated at step 42, and the update is sent to the price forecasting system (PFS) 14 at step 43. Finally, at step 44, the price forecasting system 14 connects to the traffic billing system 20 and the accounting, scheduling and processing information are entered for that sale. The process then resets and returns to start waiting for the next customer inquiry 33.

Detailed Description Text (33):

Referring to FIG. 8, a multi-station system may also be structured as a number of stand-alone inventory management systems 62 and databases 63, one for each station 51, which communicate with a central server 64 through a network 52 to maintain a master database 66. Master database 66 mirrors the contents of each of the individual databases 63 and is updated either periodically or whenever a database 63 is updated. When a request for time is received at station 51A that requires access to time data from other stations 51, system 62A receives this data from database 66 through network 52. In the event of network failure, stand alone inventory management systems 62 can continue functioning to sell time for each respective station 51. Real time updating of master database 66 is desirable to prevent potential errors due to a time lag between a change in a local database 63A indicating a sale and updating of master database 66, which will be accessed by other yield management systems 62 seeking to list, and possibly sell, a time slot of a station 51A which corresponds to database 63A. In this case, each station 51 has its own inventory management system 62 which it can take with it if the station is sold and leaves the enterprise. A hybrid system is also possible wherein each station 51 has its own price forecasting system software which accesses a common yield management system and traffic billing system through the network. This option may prove advantageous in that the price forecasting system provides the user interface function and can operate on a standalone in a situation where pricing data revisions from yield

Detailed Description Text (42):

While components such as the price forecasting system, yield management system and traffic billing system have been depicted for ease of explanation as separate software modules that exchange information either directly or by means of uploadable data files, these functions could of course be provided in a single software program with subroutines for performing the functions indicated. Where these program modules can access a common memory, the steps of sending information from one module to another may amount to simply updating the values of variables in one section of memory and then accessing the updated variables with another module within the program. These and other alternatives are within the scope of the claims which follow.

Current US Cross Reference Classification (3):

705/8

## CLAIMS:

1. A method for inventory management, comprising the steps of:

(a) receiving a customer request for an inventory item;

(b) generating a table of one or more inventory items that most closely correspond to the customer request using a price forecasting system;

(c) selecting an item from the table;

(d) generating a price quotation associated with the selected inventory item using the price forecasting system, which price quotation has been predetermined by a yield management system using a pricing strategy;

(e) inputting customer request information associated with the customer request into a traffic billing system;

(f) inputting information needed for price recalculation associated with the customer request into the yield management system;

(g) recalculating pricing data with the yield management system in a manner consistent with a pricing strategy implemented by the yield management system, so that price changes caused by a reduction in available inventory due to the customer request are taken into account; and

(h) updating the pricing data accessed by the price forecasting system in step (d) prior to repeating steps (a) to (g) for a subsequent customer request.

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L9: Entry 4 of 8

File: USPT

Aug 8, 2000

US-PAT-NO: 6101484

DOCUMENT-IDENTIFIER: US 6101484 A

TITLE: Dynamic market equilibrium management system, process and article of manufacture

DATE-ISSUED: August 8, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Gustafsson; Niklas	Bellevue	WA		
Thrun; John M.	Redmond	WA		

## ASSIGNEE-INFORMATION:

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Mercata, Inc.	Bellevue	WA			02

APPL-NO: 09/ 281859 [PALM]

DATE FILED: March 31, 1999

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/26; 705/35

US-CL-CURRENT: 705/26; 705/35

FIELD-OF-SEARCH: 705/26, 705/35

PRIOR-ART-DISCLOSED:

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WO 00/11570

PUBN-DATE  
March 2000

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ART-UNIT: 271

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ATTY-AGENT-FIRM: Cooley Godward LLP

ABSTRACT:

A dynamic market equilibrium management system is especially adapted for the sale of goods and services through an online buying group (referred to herein as a "co-op") formed for the specific purpose of purchasing a particular product at (102) by defining a start time, end time, critical mass, any minimum number of units offered, any maximum number of units offered, starting price and product cost curve. As data is gathered from buyers, by means of their making binding purchase offers, the co-op is modified at (108) using the market equilibrium manager, so as to take into account market forces such as supply and demand for the item to be sold and their interrelationship with the purchase price for such item. When used with the online buying group, the dynamic market equilibrium management system permits dynamic, real time yield management decisions based on true market data. A graphical user interface receives user inputs for directly manipulating graphical display of data from a database on a display device and displays feedback dependent variable data on the display device, such as in the form of a changed numerical value in response to the user moving at least one data point in the graphical display.

25 Claims, 11 Drawing figures

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L9: Entry 4 of 8

File: USPT

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DOCUMENT-IDENTIFIER: US 6101484 A

TITLE: Dynamic market equilibrium management system, process and article of manufacture

Abstract Text (1):

A dynamic market equilibrium management system is especially adapted for the sale of goods and services through an online buying group (referred to herein as a "co-op") formed for the specific purpose of purchasing a particular product at (102) by defining a start time, end time, critical mass, any minimum number of units offered, any maximum number of units offered, starting price and product cost curve. As data is gathered from buyers, by means of their making binding purchase offers, the co-op is modified at (108) using the market equilibrium manager, so as to take into account market forces such as supply and demand for the item to be sold and their interrelationship with the purchase price for such item. When used with the online buying group, the dynamic market equilibrium management system permits dynamic, real time yield management decisions based on true market data. A graphical user interface receives user inputs for directly manipulating graphical display of data from a database on a display device and displays feedback dependent variable data on the display device, such as in the form of a changed numerical value in response to the user moving at least one data point in the graphical display.

Application Filing Date (1):

19990331

Brief Summary Text (7):

Other key aspects of that invention include a means to allow unprecedented access to certain true market data and pricing information derived from co-op member input during the life of each co-op. For example, all buyers wishing to join a co-op must submit a binding offer guaranteeing their willingness to purchase the featured item at or below some maximum price determined by each individual member. This collection of purchase offers provides valuable quantitative data regarding price sensitivity for the featured item. In addition, it permits real time yield management decisions that often will benefit both buyers and suppliers. Specifically, the invention provides data from which a supplier can be informed that if the product price is reduced by a specified amount, the co-op's pool of accepted offers--i.e., final sales--will increase by a specific quantity. The guaranteed increase in volume due to a reduced price would improve its overall yield. Under this scenario, both the co-op buyers and the product supplier benefit from the indicated price reduction.

Brief Summary Text (17):

In order to join a co-op, each buyer must determine the maximum price at which (or below) he or she is willing to purchase the featured item. Such amount is specified in his or her binding purchase offer. That offer is guaranteed by the buyer's credit card. All offers including the various amounts at which they are submitted are collected and summarized in a database. This process enables accurate, real-time yield management decisions which can be used to advocate a lower per unit price. For example, the business entity implementing the invention would be able to determine ideal market equilibrium based on true market data, and represent to a

supplier that if the price were lowered by \$X, the sales volume will increase by an additional 1,000 units. Although the per unit price would drop, the supplier's overall profit yield may increase due to the substantial increase in volume. Hence, this invention permits the business implementing the invention to quickly and meaningfully assess the forces of supply and demand and communicate conclusions based on true market data to suppliers in order to eliminate the uncertainty that would otherwise make suppliers reluctant to lower prices.

Detailed Description Text (9):

As data is gathered from buyers, by means of their making offers, the co-op is modified using the market equilibrium manager, so as to take into account the market data in the definition of the price curve set. FIG. 3B shows such a modified curve set early in the history of the co-op. An additional change shown in FIG. 3B from the price curve set shown in FIG. 3A is that cost curve 100 and minimum price curve 102, corresponding respectively to the curves 100 and 102 in FIG. 3A, are in three segments to reflect typical volume discounts. The market equilibrium manager code is configured to allow such modifications to be made directly on the displayed curves through use of a mouse or other pointing device. The minimum offer threshold curve 106 has also been modified in FIG. 3B to give an inflection at 108 by dragging data point 110 with a mouse. As a result, some previous offers that were below the threshold curve 106 and above the minimum price curve 102 and thus ignored for the purpose of modifying the price curve 104 for the co-op, are now used to modify the price curve 104. This has the effect of modifying the price curve 104 as shown. Also shown in FIG. 3B is a histogram 112 of the total of 164 committed offers (see the data in block 114) that have been deemed acceptable at this point in the co-op because the maximum price at which they were made was equal to or greater than the current price of \$2014 on price curve 104 for that volume of sales. The data at 114 also shows that a total of 216 acceptable offers have been used to modify the price curve 104 and that the co-op will produce a gross margin of \$172,036. As merchandising staff modify the curve set shown in FIGS. 3A-3E to test "what if" scenarios, immediate direct numeric feedback on the effect of those modifications is given in the data of block 114.

Detailed Description Text (70):

.box-solid. MC.sub.-- OFFER.sub.-- SHIPPING.sub.-- ALIAS Identifies shipping destination (needed if offer becomes a real order)

Detailed Description Text (71):

.box-solid. MC.sub.-- OFFER.sub.-- PAYMENT.sub.-- ALIAS Identifies payment method (needed if offer becomes a real order)

Detailed Description Text (87):

The product list and product details modules show the co-op product description, price (with an animated image in the background to show that the price may fall even further), product features, etc. The co-op offer & checkout accepts an offer from a customer regardless of whether the offer is at the current price or at some lower price. We take the customer's name, e-mail address, shipping destination, credit card information, and the amount of the offer. We also show some legal text which informs the customer that this offer is binding and will be converted to a real order if the co-op price meets their offer amount, etc.

Detailed Description Text (88):

2. Data access components 26, having the purpose of translating database information into data that can be used to display information to buyers. These components are also responsible for updating information in the database based on interactions with the users via the various clients 24 and 32, HTTP servers 36, and co-op display components 150.

Current US Original Classification (1):

705/26



## CLAIMS:

4. The system for modifying a price curve and approaching market equilibrium in an on-line buying co-op for a product of claim 3 in which said e-commerce server software is further configured to store price and quantity data of offer inputs from buyers as the offer data in said database and said market equilibrium manager is further configured to obtain updated price data and the offer data from said database, said display component being configured to display the price curve, and offer histogram, and other information suggesting the price point at which market equilibrium is achieved.

12. The process for modifying a price curve and approaching market equilibrium in an on-line buying co-op for a product of claim 11 further comprising the step of:

(g) obtaining updated price data and offer data from the database and displaying the price curve and an offer histogram.

21. The article of manufacture of claim 20 in which the computer program additionally comprises:

(g) a seventh code segment for obtaining updated price data and the offers from the database and displaying the price curve and an offer histogram.

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File: PGPB

Aug 9, 2001

PGPUB-DOCUMENT-NUMBER: 20010013011  
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DOCUMENT-IDENTIFIER: US 20010013011 A1

TITLE: TARGETED MARKETING AND PURCHASE BEHAVIOR MONITORING SYSTEM

PUBLICATION-DATE: August 9, 2001

## INVENTOR-INFORMATION:

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CONTINUED PROSECUTION APPLICATION: CPA

## RELATED-US-APPL-DATA:

Application 08/978856 is a continuation-of US application 08/514467, filed August 11, 1995, US Patent No. 5857175

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US-CL-CURRENT: 705/14; 705/10, 705/16, 705/26

REPRESENTATIVE-FIGURES: 1

## ABSTRACT:

A system for presenting customized special offers to customers, the special offers including targeted offers to a customer selected from a plurality of customers, and for collecting purchasing behavior information concerning the customers, the system comprising a computer including a database containing customer account information providing information specific to a particular customer account; the at computer also including a database containing special offers including a targeted offer which is to be made to selected customer accounts on the basis of targeted offer targeting parameters; a plurality of customer cards, each customer card having machine readable card information indicating at least identification of the card with a particular customer account; a customer interface in communication with the computer to transfer data therebetween; the customer interface having a card reader for reading machine readable card information from the customer card; the computer including means for generating a customized customer offer list available to that particular customer account which includes the special offer; an offer communicator for communicating the customer offer list to the customer for which it is

generated; a check-out at which the customer presents purchased item information indicating items being purchased by the customer; the check-out including a card reader for reading the customer card; the computer including means for sending information from the customized customer offer list to the check-out; the computer further including means for collecting customer purchase information which is indicative of items being purchased by the customer via the check-out; the computer still further including means for editing the customer account information to reflect items purchased by the customer.

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L9: Entry 3 of 8

File: PGPB

Aug 9, 2001

DOCUMENT-IDENTIFIER: US 20010013011 A1

TITLE: TARGETED MARKETING AND PURCHASE BEHAVIOR MONITORING SYSTEM

Application Filing Date:19971126Current US Classification, US Secondary Class/Subclass:705/26Brief Description of Drawings Paragraph:[0023] FIGS. 15-17 are flow charts illustrating updating of database statistics.Detail Description Paragraph:

[0046] After the customer finishes shopping, the customer presents his or her card 22 to the check-out 34, where the card 22 is scanned before or while purchases are rung up. The system 10 includes means for associating a purchased product with a customer account if one of the cards 22 is scanned by the bar code reader 36 in sequence with scanning of products. More particularly, a list of all products for which special offers exist for at least one customer is downloaded from the store level computer to the check-out 34 at appropriate times, after special offer programs are initiated. The check-out 34 then has a list of all products for which discounts may be available to certain customers. If a customer purchases a product which is included in this list, the check-out 34 communicates with the store level computer 12 to determine if a special offer is available to the particular customer whose card 22 was scanned by the check-out 34 in sequence with the products, and to determine the value of the special offer for this customer. The check-out 34 applies any special offers available to that customer to the customer's total if the customer purchased products for which special offers were available to the customer. In one embodiment, if a product that is currently on promotion to at least one customer is scanned at the check-out 34 before the customer's card 22 is scanned, the check-out register 34 communicates the purchase to the store level computer 12 but does not necessarily wait for a response from the store level computer 12. If or when the customer card 22 is finally scanned at the check-out register 34 as part of the shopping trip, the check-out 34 communicates the card number of the customer card 22 to the store level computer 12. The store level computer 12 then communicates to the check-out register 34 each discount that the consumer qualified for because of the product purchases made in this shopping trip prior to the scan of the customer card 22. Subsequent discounts are then received by the check-out 34 immediately following the scan of a qualifying product, as previously presented.

33 d

Detail Description Paragraph:

[0049] The system 10 maintains and may communicate to each customer who uses a card 22 a running total of savings realized by that customer since the customer started using the card 22. In one embodiment, the running total of savings is communicated to the customer by the check-out 34, such as by printing the running total on the customer's receipt.

Detail Description Paragraph:

[0077] FIG. 5 is a flow chart illustrating identifying customers qualifying for

special offers. At step 84, a promotion having the flag ("stat=2") is read. At step 88, qualifying households for this special offer are identified according to the specifications of the promotion. At step 90, the special offer is inserted into the database of special offers available to each qualifying household. After performing step 90, the system proceeds to step 84 where the next status 2 special offer is read. After all "stat=2" special offers are read, the system proceeds to step 86 where all these status 2 special offers are updated to status 3 ("stat=3").

Detail Description Paragraph:

[0156] FIGS. 12-14 are flow chart illustrating transactional analysis that takes place at a check-out (point of sale terminal). A determination is made whether a household has redeemed a special offer up to the maximum quantity for which the special offer was available. If so, the household will not see that special offer again unless the manufacturer reinstates it. After a check-out transaction is completed, and a sale is closed, the shopping history of the customer is updated, to reflect all purchases made by the customer. A determination can be made as to whether the customer accepted a special offer, passed on the special offer (did not make a purchase of any product for the category), or rejected the special offer (purchased a competitor's product).

Detail Description Paragraph:

[0173] At step 282, database statistics are updated (see FIGS. 15-17). After performing step 282, the system proceeds to step 284.

Detail Description Paragraph:

[0178] FIGS. 15-17 are flow charts illustrating updating of database statistics for a single POS transaction received from either a check-out 34 at this store or from another store (see step 290).

Detail Description Paragraph:

[0180] At step 294, daily activity statistics are updated based on this transaction's type. After performing step 294, the system proceeds to step 296.

Detail Description Paragraph:

[0182] At step 298, household-level life-to-date statistics are updated for this specific household, as identified by the card 22 scanned at the check-out 34. After performing step 298, the system proceeds to step 300.

Detail Description Paragraph:

[0183] At step 300, period-based household-level statistics are updated. After performing step 300, the system proceeds to step 302.

Detail Description Paragraph:

[0185] At step 304, store-level period-based category-related statistics are updated. After performing step 304, the system proceeds to step 306.

Detail Description Paragraph:

[0186] At step 306, period-based household-level category-related statistics are updated. After performing step 306, the system proceeds to step 308.

Detail Description Paragraph:

[0188] At step 310, household-level statistics are updated. After performing step 310, the system proceeds to step 312.

Detail Description Paragraph:

[0190] At step 314, store-level period-based department-related statistics are updated. After performing step 314, the system proceeds to step 316.

Detail Description Paragraph:

[0191] At step 316, period-based household-level department-related statistics are

updated. After performing step 316, the system proceeds to step 318.

Detail Description Paragraph:

[0193] At step 320, store-level period-based product-related statistics are updated. After performing step 320, the system proceeds to step 322.

Detail Description Paragraph:

[0194] At step 322, period-based household-level product-related statistics are updated. After performing step 322, the system proceeds to step 324.

Detail Description Paragraph:

[0196] At step 326, promotional activity statistics are updated. After performing step 326, the system proceeds to step 328.

Detail Description Paragraph:

[0197] At step 328, offer statistics are updated for either the home store customer or for the visitor customer. After performing step 328, the system proceeds to step 330.

Detail Description Paragraph:

[0199] FIG. 18 is a flow chart illustrating the file transfer of shopping trips for visitors from another home store back to their home store, for further analysis at that home store. Whether a customer scanned a card 22 at a kiosk 26 or not, the purchasing history for the customer, or the household, is updated if the customer shops at a store other than the customer's home store and scans the card 22 at a check-out 34 at that (remote) store.

Detail Description Paragraph:

[0209] At step 348, database statistics are updated (see FIGS. 15-17). After performing step 348, the system proceeds to step 338.

CLAIMS:

8. A system in accordance with claim 1 and further comprising means for maintaining and for communicating to each customer a running total of savings realized by that customer since the customer started using the card.

9. A system in accordance with claim 1 and further comprising means for maintaining for each customer a running total of savings realized by that customer since the customer started using the card, wherein the check-out communicates to each customer a running total of savings realized by that customer since the customer started using the card.

34. A system in accordance with claim 27 and further comprising means for maintaining and for communicating to each customer a running total of savings realized by that customer since the customer started using the card.

35. A system in accordance with claim 30 and further comprising means for maintaining for each customer a running total of savings realized by that customer since the customer started using the card, wherein the check-out communicates to each customer a running total of savings realized by that customer since the customer started using the card.

58. A system in accordance with claim 52 and further comprising means for maintaining and for communicating to each customer a running total of savings realized by that customer since the customer started using the card.

59. A system in accordance with claim 52 and further comprising means for maintaining for each customer a running total of savings realized by that customer since the customer started using the card, wherein the check-outs communicate to

the customers a running total of savings realized by each customer since the customer started using the card.

82. A method in accordance with claim 76 and further comprising the step of maintaining and communicating to each customer a running total of savings realized by that customer since the customer started using the card.

91. A method in accordance with claim 85 and further comprising the step of maintaining and communicating to each customer a running total of savings realized by that customer since the customer started using the card.

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